CLAIMS:

1. In a Wireless Local Area Network (WLAN) device, a method for selecting a frequency band of operation of a plurality of frequency ranges supported by the WLAN device, the method comprising:

for each of the plurality of frequency ranges supported by the WLAN device, determining a quality indicator for at least one frequency range;

determining a composite quality indicator for each of the plurality of frequency ranges;

based upon a comparison of the quality indicators for each of the plurality of frequency ranges, selecting at least one frequency range for continued operation.

2. The method of claim 1, wherein a quality indicator for a selected frequency range considers a desired channel power and an undesired interference power for the selected frequency range that includes a channel within the frequency range.

3. The method of claim 2, wherein the interference power includes in-channel interference and adjacent channel interference for the channel in the selected frequency range.

4. The method of claim 1, further comprising selecting a communication protocol for operation from a plurality of available communication protocols.

5. The method of claim 1 further including selecting at least two frequency bands and communicating over at least one channel in each of the two frequency bands.

6. The method of claim 1 further including searching all channels from a group of channels to determine whether a beacon is detected.

7. The method of claim 6 further including creating a group of channels for which no beacon was detected.

8. The method of claim 7 further including sampling a gain code in phyregs space periodically.

9. The method of claim 8 further including storing the gain code if the gain code value is smaller than a previously stored value.

10. The method of claim 10 wherein the gain code value is stored in shared memory.

11. The method of claim 6 wherein a channel is removed from the group of channels if a beacon is detected.

12. The method of claim 11 further including determining whether there are any channels left in the group of channels.

13. The method of claim 12 wherein the channel having a maximum signal-to-signal plus noise value is selected of the group of channels for which no beacon was detected.

14. The method of claim 12 wherein the channel having a maximum signal-to-signal plus noise value is selected of the entire group of channels to select an optimal channel of the group of channels for which a beacon was detected.

15. A Wireless Local Area Network (WLAN) device, comprising:

a first baseband processor interface for receiving, processing and generating digital data;

a first radio for receiving the digital data and for transmitting RF signals in a first frequency band and for receiving RF signals in the first frequency band and for producing corresponding digital data to the first baseband processor interface;

a second baseband processor interface for receiving, processing and generating digital data; and

a second radio for receiving the digital data and for transmitting RF signals in a second frequency band and for receiving RF signals in the second frequency band and for producing corresponding digital data to the second baseband processor interface.

16. The WLAN device of claim 15 further comprising logic for determining a quality indicator, wherein the quality indicator for a selected channel considers a channel power and interference power for the selected channel.

17. The WLAN device of claim 16, wherein the interference power includes in-channel interference and adjacent channel interference.

18. The WLAN device of claim 15, further comprising logic for selecting a communication protocol for operation from a plurality of available communication protocols.

19. The WLAN device of claim 15 further including logic for selecting at least two frequency bands and communicating over at least one channel in each of the two frequency bands.

20. The WLAN device of claim 15 further including first and second radio interfaces and first and second baseband processors wherein the first baseband processor communicates with the first baseband processor interface by way of the first radio interface and the second baseband processor communicates with the second baseband processor interface by way of the second radio interface.

21. The WLAN device of claim 15 further including first and second radio interfaces wherein the first baseband processor communicates with the first baseband processor interface by way of the first radio interface and with the second baseband processor interface by way of the second radio interface.

22. A Wireless Local Area Network (WLAN) device, comprising:

a baseband processor for receiving, processing and generating digital data;

a first radio for receiving the digital data and for transmitting RF signals in a first frequency band and for receiving RF signals in the first frequency band and for producing corresponding digital data to the first baseband processor;

a second radio for receiving the digital data and for transmitting RF signals in a first frequency band and for receiving RF signals in the first frequency band and for producing corresponding digital data to the second baseband processor; and

wherein the baseband processor generates digital data for transmission from one of the first radio, the second radio or both.

23. The WLAN device of claim 22 further comprising logic for determining a quality indicator, wherein the quality indicator for a selected channel considers a channel power and interference power for the selected channel.

24. The WLAN device of claim 23, wherein the interference power includes in-channel interference and adjacent channel interference.

25. The WLAN device of claim 22, further comprising logic for selecting a communication protocol for operation from a plurality of available communication protocols.

26. The WLAN device of claim 22 further including logic for selecting at least two frequency bands and communicating over at least one channel in each of the two frequency bands.

27. A gateway that supports Wireless Local Area Network (WLAN) communications comprising:

a processor;

a memory operably coupled to the processor;

an interface operably coupled to the processor;

at least one WLAN interface operably coupled to the interface, wherein the at least one WLAN interface supports WLAN communications in a number of frequency bands and according to a number of communication protocols; and

at least one wired Local Area Network (LAN) interface operably coupled to the interface, wherein the at least one wired LAN interface supports LAN communications.

28. The gateway of claim 27 wherein the at least one WLAN interface operates according to an 802.11 protocol.

29. The gateway of claim 28 wherein the at least one WLAN interface operates according to an 802.11(a) protocol.

30. The gateway of claim 28 wherein the at least one WLAN interface operates according to an 802.11(b) protocol.

31. The gateway of claim 28 wherein the at least one WLAN interface operates according to an 802.11(g) protocol.

32. The gateway of claim 28 further including a Bluetooth interface.

33. The gateway of claim 27 wherein the LAN interface comprises an Ethernet medium access module.

34. The gateway of claim 27 wherein the LAN interface comprises a home network (HPNA) module.